

# Falcon Acoustics LS3/5a standmount loudspeakers

by Alan Sircom

There is almost no point in discussing some parts of this loudspeaker. The BBC-designed LS3/5a is the stuff of legend, and in our little world as well-known, as ubiquitous, and as popular as the original Issigonis Mini. And, until recently, it was just as consigned to history as the original Mini. That's all changed, and the Falcon Acoustics LS3/5a is a bold attempt to recreate the original design from scratch.

A little history is in order, however. The LS3/5a was originally designed in the early 1970s, by the BBC Engineering Department team headed up by Dudley Harwood (the 'Har' in 'Harbeth'). It was intended as a monitor for portable 'OB' (outside broadcast) vans and in small studios, but by 1975 was starting to be sold to home users. The sealed two-way small box used a 19mm SP1032 T27 dome tweeter with a Melinex diaphragm and a 127mm Bextrene SP1003 B110 mid-bass unit from KEF, and was, by 1970s standards at least, made to very fine tolerances (the BBC demanded the ability to match loudspeakers precisely, even if one of the pair had been bolted to a studio wall for five years, and the other was fresh off the production line). That could only be performed with a complex crossover network, resulting in a loudspeaker with a relatively low 83dB sensitivity but a benign impedance load (in this case, 15 ohms).

The LS3/5a continued as both a domestic loudspeaker and broadcast monitor for about a quarter of a century, but the KEF drive units were discontinued the mid 1990s, which kind of put a dampener on continued production. Also, by this time there were a number of loudspeakers inspired by or derived from the original LS3/5a, perhaps the best known being the Harbeth P3ESR. ▶



*“The LS3/5a is an eloquent and refined musical transducer, especially when used with modern electronics.”*



Falcon also uses the same BBC FL6/23 crossover network circuit used in the original 15 ohm version of the original LS3/5a loudspeaker. This allows the graded drive units to be matched to the sort of tolerances the BBC first specified (and which are still hard to match to this day). The cabinet is made from Baltic ply with Beech fillets, now finished in a range of veneers, and terminating in a single pair of speaker terminals, and a pair of Tygan grille cloths. Short of getting John Arlott or Brian Johnston back for *Test Match Special* (not easy... they both died in the 1990s), you don't get more classic BBC than this today. Oxford-based Falcon Acoustics is also keeping the dream alive for existing LS3/5a owners by offering everything from replacement cabinets and drivers, to full crossover networks with matched pairs of HF caps for driver matching. And yes, you could also use that Falcon B110 to repair a Linn Kan.

But it's the complete, finished LS3/5a that's the icing on the Falcon Acoustics cake. And it's here that I sometimes find our British sense of self-deprecation to be at its most self-destructive. The LS3/5a is one of the cornerstones of classic British audio, and yet the British are the first to point to its flaws rather than highlight its obvious benefits. Checking an LS3/5a out in mid 2018 is something of a revelation because it is still current. In fact, it's one of those loudspeakers that benefits from a spot of modern re-evaluation and partnering; put this loudspeaker with really good, modern electronics and it shines, and some of the 'relaxed' criticism of the LS3/5a seems more a reflection of the amplifiers of the time than the loudspeaker itself.

The LS3/5a is an eloquent and refined musical transducer, especially when used with modern electronics: I used it predominately with the Naim Uniti Nova, and the pairing shined brightly. It is all about precision of sound and image, and if those two aspects of performance align with your own sensitivities, then the LS3/5a is a perfect partner for many listeners, especially those in small rooms. It's diametrically opposed to the sound of horns, that big, effortlessly dynamic, sometimes cuppy and coloured and blousy sound of a classic 1950s horn is very much at odds with the small scale, precise, accurate, and dynamically controlled sound of a LS3/5a.

In other words, the LS3/5a is accurate from about 100Hz up to about 20kHz. It was designed at a time when post-20kHz sound was surplus to requirements, and while that might disenfranchise the high-res brigade, the sound of those high-frequencies is so sweet and likeable that they just might not care. A petty little swipe often directed at the LS3/5a is that this sweetness made it likeable to chamber music enthusiasts and no-one else, but in fact it brings out the sonic greatness of something like Pink Floyd's *Dark Side of the Moon* [Harvest]. It's also fast and expressive enough to cope with Eminem's motormouth on *The Eminem Show* [Interscope]. A loudspeaker that doesn't stray too far below 70Hz isn't big on 'slam' and bass force or depth, but it's remarkably enjoyable when driven by a very good and modern-sounding amplifier.

▶ Normally, an absence of drive units would mark the end of a loudspeaker design, and in fairness there had been more than a decade of hiatus where brands went more for the spirit of the LS3/5a than the actual design; in some cases, 'spirit' was closer to '25 year old single malt'; in others it was more 'bathtub gin that could blind a horse'. It's here where Falcon Acoustics comes in.

Falcon received a license to build the 15 ohm LS3/5a from the BBC a few years ago, and instead of making a BINO (BBC In Name Only) model with near-enough drive units, Falcon asked retired engineer Malcolm Jones to re-engineer the T27 and B110 drive units from scratch. Given that Jones' job – before starting Falcon Acoustics – was to design and build drive units for KEF and both designs fell under his purview, if any company can do this, Falcon can! The Falcon T27 and Falcon B110 are new production stock.

*“Bringing back the LS3/5a is a bold move for a small company, and Falcon Acoustics deserves great praise simply for doing that job.”*

► Beyond all, though, it's the imaging that really gets to you with the LS3/5a. It's small enough to act almost as a point source, and set up for outstanding imaging in the room (far enough out for good stereo, not so far as to undermine bass, or less than about 30cm from the rear wall) and you are rewarded with a natural 3D soundscape extended wide and deep of the speaker cabinets. This was the reason they were designed in the first place; as a monitor of speech and music in a small BBC control room. Such a monitor demands detail of both music and the stage it presents, and the LS3/5a does that beautifully. The Falcon reproduces the LS3/5a performance equally beautifully. The worry with any recreation is that it becomes effectively a re-enactor; like the well-fed fourtysomething pretending to be a malnourished, louse-ridden teenage soldier of the English Civil War – the stitch-perfect recreation is still way better upholstered than the original. That doesn't seem to be the case here, and it's a testament to Falcon that they have recreated the LS3/5a anew, right down to the strengths and weaknesses inherent to that 44 year old design.

So, those thin-walled ply cabinets remain, and perfectly show the modern listener just what a speaker with low cabinet colouration can sound like, without having to call upon a thick cabinet of modern polymers that is five times heavier and more expensive than the BBC design. It shows that although materials science has moved on greatly in the intervening generations, those early 'plastic' cones and domes still have their place in terms of outright fidelity, even if it is at the expense of efficiency.

Because the Falcon sticks resolutely to the original design, you don't get much in the way of effortless dynamics or deep bass, but used in its original context (small listening rooms, not the back of OB trucks) and it works wonders because the LS3/5a doesn't set the room off, and won't let you set the room off by playing too loud. This is why they are still popular with companies demonstrating their audio electronics in hotel rooms at audio shows around the world. Trying to rid yourself of room nodes in an 8'x6' room is an exercise in futility as the amount of bass trapping required would be larger than the room. The LS3/5a – by simply not going there – will sound tauter and more precise in such a room. Moreover, there's a very slight lift (both to the treble and the upper bass), that gives a bit more body and presence to the sound in such a small room. It's perhaps the best example of the 'less is more' approach, and in case you think the idea of someone trying to use any loudspeaker in so small a room is absurd, I give you... Chelsea property pricing, or Saint-Germain-des-Prés property pricing, or SoHo property pricing. And, once again, in the context of good modern electronics, the LS3/5a is a more dynamic proposition, in more ways than one. A larger loudspeaker is a better prospect for more dynamic sound with deeper bass goes without saying; this isn't a loudspeaker that tries to tamper with the laws of physics. The LS3/5a, however, remains remarkably cogent as an option for those who are unable to use a larger loudspeaker,

## TECHNICAL SPECIFICATION

**Type:** two-way sealed-box standmount loudspeaker  
**Drive Units:** 19mm T27 tweeter, 127mm B110 mid-bass unit  
**Frequency Response:** 70Hz - 20kHz ± 3dB  
**Sensitivity:** 83dB  
**Impedance (nominal):** 15ohms  
**Finishes:** Cherry, Walnut, Rosewood, Burr Walnut, Yew  
**Size (WxHxD):** 19 × 30.5 × 16.5cm  
**Weight:** 5.35kg  
**Price:** from £2,350/pair

**Manufactured by:** Falcon Acoustics  
**URL:** [falconloudspeakers.co.uk](http://falconloudspeakers.co.uk)  
**Distributed in the UK by:** Karma AV  
**URL:** [karma-av.co.uk](http://karma-av.co.uk)  
**Tel:** +44(0)1423 358 846

whether through domestic harmony or the sheer cost of real-estate. It's the small room speaker for the listener who wants refinement, accuracy, and soundstaging.

Bringing back the LS3/5a is a bold move for a small company, and Falcon Acoustics deserves great praise simply for doing that job. The fact it not only provides new loudspeakers but can also supply all the parts to keep older LS3/5a's alive should be shouted about. But perhaps best of all, it's the best embodiment of the phrase 'there's life in the old dog yet!' The LS3/5a is no 'preserved in aspic' design, even if the parameters for the loudspeaker are extremely tightly controlled. It's not only a history lesson, but a cogent small speaker for small rooms even in today's market. And if you feed them well, the Falcons can give very satisfying results. +